

AMPHIPOEA VELATA (WALKER) (LEPIDOPTERA: (NOCTUIDAE) ATTACKING CORN NEAR FRIENDSVILLE, MARYLAND^{1, 2}

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ABSTRACT: The noctuid, *Amphipoea velata* (Walker), was observed attacking 20-30 cm corn in early June in Garrett Co. Md. Larvae made nests by tying leaves together with silk. Feeding habits included general defoliation, tunneling in the stalk, and cutting through the base of the stalk. The larvae fed on several species of weeds in addition to corn. Infestations occurred in grassy-weedy patches and averaged 6.2 larvae per corn plant. Carbaryl treatment produced 40% mortality (many larvae were protected by their leafy retreats).

On June 4, 1980, a sample of "leaf-tying" larvae was submitted to us for identification. The larvae were collected⁴ from corn on a farm, 4 miles west of Friendsville, Garrett Co., Maryland. Using the larval key of Crumb, 1956, the specimens were identified to the genus *Septis*, a synonym of *Amphipoea* (= *Apamea*) (Lepidoptera: Noctuidae). Approximately 75 larvae were placed on cabbage looper media; the majority fed and moulted to pupae but only 5 adults emerged. Adults were then identified by Linda Butler, and confirmed by Eric Quinter, American Museum of Natural History, as *Amphipoea velata* (Walker).

The infested field was visited on June 5, 1980; the corn plants were 20 to 30 cm tall. The field was located along the top of a ridge. Cultivation was no-till, and numerous weeds occurred in random patches. The crop was planted on May 5, 1980 with an application of fonofos insecticide. The *A. velata* infestation was generally confined to weedy-grassy areas. The larvae made silken retreats by joining leaf margins together, thus forming curled tubes in corn and grass leaves, or leafy nests in broad-leaved weeds. Small larvae formed retreats by merely folding over leaf margins. Feeding habits included general defoliation, tunneling in the stalk, and cutting through the base of the stalk. Numerous plants were severely defoliated or cut off at the base. Damage to the corn crop was serious enough that the farmer considered plowing and replanting. A survey of another, distant corn field (5 km S.) indicated a light infestation along the forest margin (1 larva per 50

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corn plants). A survey of larvae in a sample of 20 infested corn plants within a weedy patch yielded an average of 6.2 larvae (2nd to 5th instar) per plant (range of 1 to 14). Weeds found were quackgrass (*Agropyron repens* (L.)), pokeweed (*Phytolacca americana* L.), jimson weed (*Datura stramonium* L.), blackberry (*Rubus* spp.), and milkweed (*Asclepias syriaca* L.). Larval nests and feeding damage were found in all weed plants except pokeweed.

The infestation was treated with carbaryl insecticide and dicamba herbicide on June 4, 1980, and by the following day, approximately 40% of the larvae were dead or moribund. Apparently, the balance of the larvae were protected by their silken retreats.

A literature search revealed no previous report of attack by this insect on corn or other crops. Forbes (1954), using the name *Apamea velata* Walker, relates that it feeds on grasses and is sometimes common but not injurious. Dethier (1944) described the larva and pupa and gave the following life history details for Massachusetts: overwintering pupae produce adults in the spring and eggs hatch in early May; second generation adults appear in early June and a third generation of adults appears in late July and August, producing larvae which develop to overwintering pupae. The adult male is illustrated by Grote and Robinson (1867) as *Apamea sera*.

No larvae of *A. velata* were observed causing injury during the 1981 growing season. Apparently, this is a fine example of a normally innocuous insect which has the potential to become a pest when conditions are favorable. Because of its voracious feeding habits and immense reproductive potential, future surveillance for outbreaks of this insect is warranted.

LITERATURE CITED

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- Forbes, W.T.M. 1954. Lepidoptera of New York and neighboring states. Part III. Noctuidae. Cornell Univ. Agr. Expt. Sta. Mem. 329. p. 189.
- Grote, A.R. and C.T. Robinson. 1867. Description of American Lepidoptera, No. 3. Trans. Amer. Entomol. Soc. 1: 323-360. (Fig. 55, plate 7).

BOOKS RECEIVED AND BRIEFLY NOTED (Continued)

PHENETICS & ECOLOGY OF HYBRIDIZATION IN BUCKEYE BUTTERFLIES. J.E. Hafernik, Jr. 1983. Univ. of Calif. Press. 109 pp. \$16.50.

This paper analyzes interrelationships among North and Central American representatives of *Junonia*, exclusive of the Caribbean region.